

# ANTIBIOTICS BEFORE DENTAL TREATMENT

**Prophylactic Antibiotics** = Taking an antibiotic prior to receiving some dental treatments when a patient is considered to have a high risk condition. This is quite different from taking an antibiotic because you have an existing abscessed tooth or gum disease. Although there is no scientific evidence to support that this preventive treatment is effective and should be required, it is generally thought bacteremias associated with acute infection in the oral cavity, skin, respiratory, gastrointestinal and urogenital systems and/or other sites can and do cause late implant infection. Be aware that dentists are not restricted from deviating from these guidelines based on a patient's individual health status and the anticipated dental procedure. The decision to use antibiotics prophylactically is a balance between the risk of inappropriate antibiotic use resulting in antibiotic toxicity, allergy, and microbial resistance and the possibility of secondary bacterial infections. Antibiotic prophylaxis guidelines exist for two groups of patients.

1. Patients with **heart conditions** that may predispose them to infective endocarditis (an uncommon but life-threatening infection)
2. Patients who have **total joint replacements** who may be at risk for developing hematogenous infections at the site of the prosthetic

Whenever antibiotics are taken, the concurrent use of probiotics (such as lactobacillus acidophilus or bifidobacterium bifidus) to replace the beneficial bacteria eliminated by the antibiotics may be beneficial. It should be taken between doses of antibiotics. This therapy should also be continued after antibiotics are stopped to ensure repopulation of the gut.

Because of the possible negative side-effects of antibiotic use, some people choose not to take antibiotics. The decision to use or not use antibiotics is the patient's risk, and understand that not taking the prescribed antibiotics would not likely be encouraged or supported by a physician or dentist because of their concern for your health and possible malpractice charges if complications arose. If your physician or dentist allows you to make such a decision, be sure to discuss it with and inform your family, and expect to sign an informed refusal form. As for everything in life, weigh the risks against the benefits.

## **2003 Guidelines for patients who have total joint replacements**

These guidelines were developed by the American Academy of Orthopaedic Surgeons and the American Dental Association. They are not considered a standard of care or a substitute for the practitioner's clinical judgment. For the first two years after a joint replacement, **all** patients may need antibiotics for all high-risk dental procedures. After two years, only **high-risk** patients may need to receive antibiotics for high-risk procedures.

**High-risk Patients** = Inflammatory arthropathies (such as rheumatoid arthritis, systemic lupus erythematosus), drug or radiation-induced immunosuppression, previous prosthetic joint infections, malnourishment, hemophilia, HIV infection, insulin-dependent (type 1) diabetes, prior or present malignancy, and other such conditions

**High-risk Dental Procedures** = Dental extractions, all periodontal procedures (such as surgery, subgingival placement of antibiotic fibers/strips, scaling and root planing, probing), dental implant placement, replantation of avulsed teeth, endodontic instrumentation or surgery only beyond the apex, initial placement of orthodontic bands (not brackets), intraligamentary and intraosseous local anesthetic injections, regular cleaning of teeth or implants where bleeding is anticipated

## **ORAL PROTOCOL**

Take the appropriate single dose of antibiotic 1 hour prior to your dental appointment.

(over)

The standard antibiotic and single dose is: **AMOXICILLIN or CEPHALEXIN or CEPHRADINE**

(Adults: 2 gm, Children: 50 mg/kg of wt)

If penicillin-allergic, use instead: **CLINDAMYCIN** (Adults: 600 mg, Children: 20 mg/kg of wt)

## **2007 Guidelines for patients who have heart conditions**

These guidelines were developed by the American Heart Association. They are not considered a standard of care or a substitute for the practitioner's clinical judgment. They concluded that only an extremely small number of cases of infective endocarditis might be prevented by antibiotic prophylaxis for dental procedures even if such prophylactic therapy were 100 percent effective.

**Highest-risk Patients** = Prosthetic cardiac valve or prosthetic material used for cardiac valve repair, previous infective endocarditis, congenital heart disease (unrepaired cyanotic CHD, including palliative shunts and conduits, completely repaired congenital heart defect with prosthetic material or device, whether placed by surgery or by catheter intervention, during the first 6 months after the procedure, repaired CHD with residual defects at or adjacent to the site of a prosthetic patch or prosthetic device which inhibits endothelialization), cardiac transplantation recipients who develop cardiac valvulopathy

**Dental Procedures** = all dental procedures that involve manipulation of gingival tissue, the periapical region of teeth, or perforation of the oral mucosa

### **ORAL PROTOCOL**

Take the appropriate single dose of antibiotic 30-60 minutes prior to your dental appointment.

The standard antibiotic and single dose is: **AMOXICILLIN** (Adults: 2 gm, Children: 50 mg/2.2 lb of wt)

If penicillin-allergic, use instead: **CLINDAMYCIN** (Adults: 600 mg, Children: 20 mg/2.2 lb of wt)

**or AZITHROMYCIN** (Adults: 500 mg, Children: 15 mg/2.2 lb of wt)

**or CLARITHROMYCIN** (Adults: 500 mg, Children: 15 mg/2.2 lb of wt)

Alternatives to antibiotics that have been used are homeopathic remedies, colloidal silver, Coneflower (Echinacea angustifolia), Garlic, Goldenseal (Hydrastis canadensis), Licorice (Glycyrrhiza glabra), Shitake Mushroom, Tea Tree Oil, Thyme Oil, Oregano Oil, Savory Oil, Eucalyptus, Inula Graveolens Oil, Lavender Oil, Vitamin C, homeopathics, Calendula, and Astragalus (Astragalus membranaceus). Protocols would be either ingestion and/or rinsing before and after dental procedures.

Some references on natural "antibiotics" or immune-boosting alternatives are:

1. Beyond Antibiotics...Healthier Options for Families, by Michael Schmidt, D.C., Lendon Smith, M.D., Keith Sehnert, M.D.
2. Natural Alternatives to Over-the-Counter and Prescription Drugs by Michael Murray, N.D.
3. Dr. Wright's Book of Nutritional Therapy by Jonathan Wright, M.D.

*This information is provided for educational purposes only, and should not be considered a recommendation for any particular treatment, product, or philosophy. You have the sole responsibility to examine the benefits and risks of available options and decide what treatment, if any, is to be rendered. The First Amendment of the U.S. Constitution grants the right to discuss openly and freely all matters of public concern, and to express viewpoints no matter how controversial or unaccepted they may be.*

Ronald L. King, DDS

Giang T. Pham, DDS

6100 Excelsior Boulevard, Suite East

St. Louis Park, MN 55416

Phone: 952-929-4545

e-mail: [kingtooth@live.com](mailto:kingtooth@live.com)

Web site: [www.kingtooth.com](http://www.kingtooth.com)

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